

## NERVOUS AND VASCULAR SYSTEMS.

I. Clinical Contribution to the Surgery of Nerves. By Dr. J. ALBRECHT (Zurich). 1. *Nerve Suture*. The author gives the details of one case of primary and two cases of secondary suture of the radial by Krönlein. In the case of primary suture it is not possible to give the exact data as to the recovery of function of the injured nerve (*Radialis*). On the twelfth day there could be performed an elevation of the carpus, on the fourteenth day an extension of the phalanges (*Interossei* muscles). The tactile sensibility was the same as at the time of the operation. He lays stress on mistaking the action of the *interossei* for that of other muscles, and the sensibility of the finger tips as a sign of return of function of radial. Observation proves that the first signs of electric irritability appear in the course of the third or fourth week. In the majority of cases the return of function of the sutured nerve is placed in the tenth or twelfth week. Krönlein in his first case observed a partial restoration of function only after eight months. In all cases authors agree that the process of recovery once initiated continued over a long period. Whether primary or secondary it required months or years for complete restitution of function, while in some cases of primary suture the symptoms of recovery are early in onset, in others they are delayed as long as in secondary cases. There are no positive conclusions to be drawn as to the relation of the time elapsing before operation (secondary) and the time for complete recovery. It has been found that in all cases of successful primary nerve suture, apparent atrophy of muscles and their loss of reaction to the electric current sets in. These persist for a time, and in time recover. The electric reaction sets in through indirect channels. It is only after the lapse of time that the newly formed nerve fibre reaches the muscle—electric irritability. The experimental or clinical primary union of a nerve with restitution of functions in a short time has not yet been attained. This failure of immediate restitution is due to the rapid degeneration of the fibres of the peripheral end of the nerve. A restitution with capacity of transmission and function occurs through the process of regeneration. Regeneration demands two or three months. The complete restitution of function may as above last years, the exact im-

mediate coaptation by suture and slight muscular atrophy are favorable elements to speedy restitution. The time for regeneration in these cases is however approximately the same.

2. *A Case of Traumatism of the Lateral Half of the Cord.*—A stiletto wound in the back on the left of the spine of the third dorsal vertebra occurred in a robust male, æt. 22. Among the symptoms were complete paralysis of the left lower extremity (motor); muscle sensation normal. Hyperesthesia of the skin not present. The tendon reflex of the left side somewhat increased. There is a broad anaesthetic zone on the left side of the trunk, as high as the tenth rib, about 3 cm. above the umbilicus. The upper limit is formed by a line on the fifth rib. On the left side there is anaesthesia of the right lower extremity, also analgesia and loss of sensation of temperature. The anaesthesia reaches as high as the fifth rib. Reflex normal: no vaso-motor disturbance. Four years subsequently a slight motor paralysis of left lower extremity remained, with increased tendon reflex, intact sensibility of the left side and the tactile sensibility same as after accident. The above analgesia and loss of sensation for temperature changes have changed but little since accident. Lesion is perhaps in the posterior lateral column of the cord as high as the entrance of the roots of the fifth intercostal N. The author is inclined to accept a partial regeneration of fibres of the cord.

3. *Neurectomy.*—The author records one case of resection of motor and ten cases of resection of sensory nerves. Of the latter cases 7 were males, 3 females. All were operated on for neuralgias seated in the trigeminus supraorbitalis, 1; infraorbitalis, 4; mandibularis, 4; lingualis 1; buccinatorium, 1. These 11 neuralgias required 15 operations. A favorable result was obtained in all cases, but of varying duration. Two patients up to date are permanently cured. The remainder were attacked with a return of the painful malady at periods varying from six months to three years.—*Deutsche Zeitschr f. Chirurgie*, bd xxvi, heft 5 and 6,